

**L05025** LED Driver 30W, DALI, 7 - 43 Vdc, 100 - 1000mA

**L1A1MID100S-30E**

**L05040** LED Driver 40W, DALI, 7 - 55 Vdc, 100 - 1000mA

**L1A1MID100S-40E**

## Engineered for Best Fixture Performance

Fulham LumoSeries drivers are all built on core engineering design principles for exceptional standards of performance and reliability in LED systems. Highest-grade critical components together with design features for thermal management ensure excellent reliability. Our low ripple designs create flicker-free lighting and perfectly smooth dimming. Simplicity of specification and installation is a key characteristic of all Fulham LumoSeries drivers. Hence the wide voltage and current ranges and industry leading low inrush current.



Suitable for:



**Awarded DALI driver with high efficiency and adjustable current setting.**

## Engineered for Performance

- Industry leading efficiency
- Excellent EMC behavior
- Very high power factor

## Engineered for Reliability

- Low inrush current
- Thermal protection (automatic current limiter)
- Short and open circuit protection, overload and overvoltage protection

## Engineered for Simplicity

- Future-proof flexibility – industry leading voltage and current range enabling seamless support of LED generations and minimizing supply chain complexity

## 5 year warranty

Fulham LumoSeries takes pride in the quality of its products. We not only develop all products in house, they are also produced to ensure guaranteed reliability and performance. Fulham LumoSeries drivers come with the assurance of a 5 year warranty. After all, with typical LED lifetimes of 50,000 hours, it is critical to have a power supply with equal reliability.



## Product features

- Wide output voltage range 7 - 55 Vdc
- Wide range of current settings 100 - 1000 mA
- DALI controllable
- Suitable for warm dimming (natural toning/ dim-to-warm) LEDs
- Max inrush current 0.88 A
- Zero ripple current
- Dual stage topology
- Active output overvoltage protection
- Up to 89 % efficiency across a wide range of loads
- Power factor 0.98
- SELV
- ENEC certified
- Engineered and manufactured in Europe

## Certificates and standards

- ENEC05, CE
- EN55015 / EN61000-3-2 / EN61347-2-13 / EN61347-1 / EN61547 / EN62384 / SELV

## Classifications



\* Class II, enhanced insulation, when used with strain relieve.  
\*\* Class II, reinforced insulation, when built in without strain relieve.

## Specific technical data

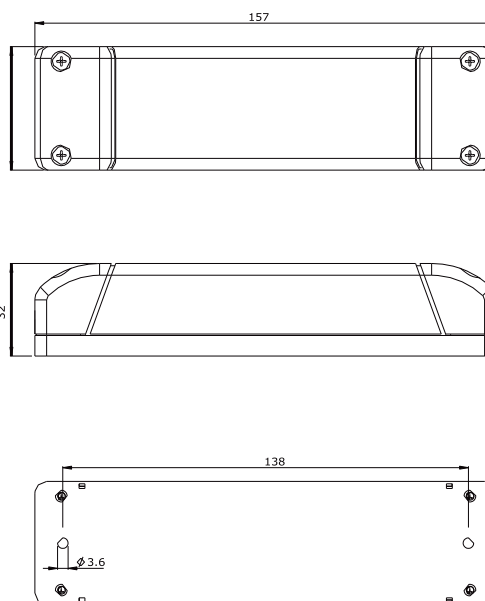
Type	Efficiency at full load	Nominal line current at 240 Vac	Output voltage range	Open circuit output voltage	Max. output power
L05025	88 %	145 mA	7 - 43 Vdc	50 Vdc	30 W
L05040	89 %	195 mA	7 - 55 Vdc	64 Vdc	40 W

## Technical data

Rated supply voltage	220-240 Vac
Input voltage	160-240 Vac / 150-375 Vdc*
Mains frequency	50/60 Hz
Output current tolerance	5%
100 Hz ripple current	<1%
Power factor at full load	0.98
Standby power	500 mW
Output current	100 – 1000 mA
Dimming method	Linear (via DALI)
Minimum dim level	Pulse: 15mA
Nonvolatile memory	Yes
Output voltage setting time	1 second
Output isolation	SELV
Surge protection (diff. / comm.)	2 kV / 6 kV
IP classification	IP 20
Circuit lifetime	50,000 hrs at Tc max.
Case dimensions	157 x 42 x 32 mm
Case material	Polyamide 6 (PA6)

\* External DC fuse is required

## Dimensions



## Inrush current

Mains max. peak inrush at full load	0.255A per driver on phase 60° (average starting angle)*
	0.851A per driver on phase 90° (worst case starting angle)*
	0.321A per driver on phase 60° (average starting angle)**
	0.879A per driver on phase 90° (worst case starting angle)**

\*\* Tested at 240 Vac 1 driver connected, with TTI HA1600A analyzer.

\* Tested at 240 Vac 10 drivers parallel connected, with TTI HA1600A analyzer.

## Maximum number of drivers on automatic circuit breakers

Automatic circuit breaker type	C10	C13	C16	C20	B10	B13	B16	B20
L05025	69	89	110	138	69	89	110	138
L05040	44	57	70	87	44	57	70	87

## Thermal specifications

Ambient temperature range (Ta)	-20 to 40°C*
Maximum case temperature (Tc)	< 65°C**
Storage temperature range	-20 to 50°C

\* -20° to 50°C when mounted on a heat conductive surface

\*\* 80°C when mounted on a heat conductive surface at Ta 50°C

**Overload protection**

If the maximum output power is exceeded, the LED driver reduces the LED output current. After elimination of the overload the nominal operation is restored automatically.

**Over temperature protection**

The LED driver is protected against thermal overload. If the temperature limit is exceeded, the output current is reduced.

**Active overcurrent protection**

Active overcurrent protection to allow hot swapping of LEDs higher than 3 Watt (only on the L05040!). The L05025 does not allow hot swapping of the LEDs!

**Secondary switching**

The L05025 and L05040 are designed to switch the LEDs on/off with the DALI bus.  
The L05025 and L05040 are not designed to switch the LEDs directly on/off in the secondary powerline.

**Short-circuit protection**

In case of a short circuit the LED driver switches to protection mode. After the removal of the short-circuit the LED driver will recover automatically.

**No-load operation**

In no-load operation the output voltage will not exceed the specified open circuit output voltage.

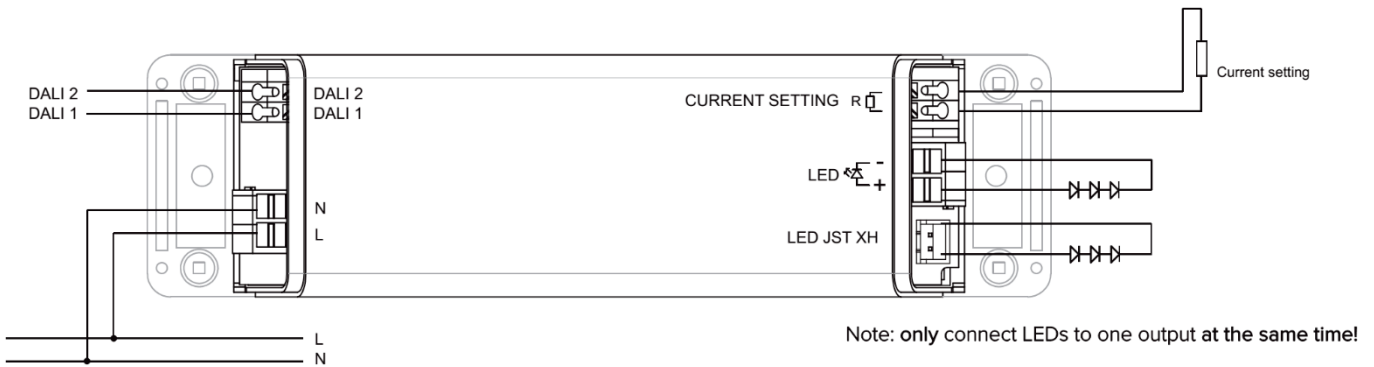
**Warm dimming**

The L05025 and L05040 use the linear dimming method instead of PWM. Therefore the driver is suitable for warm dimming / dim-to-warm / Natural toning / sunset dimming / warm glow dimming.

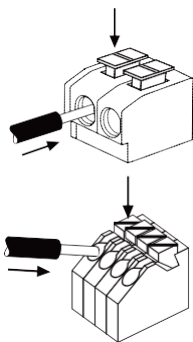
**LED load**

Fulham LumoSeries LED drivers are designed to drive passive LEDs, COBs and LED assemblies.  
Proper function is not guaranteed when (LED) loads with active components are used.

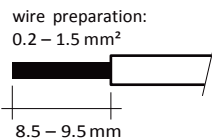
**Wiring diagram**



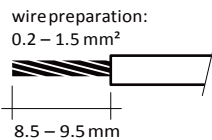
**Wiring of device**



**Solid**

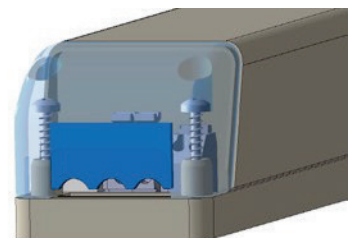


**Stranded**



**Strain relief**

The strain relief insert can be reversed or removed to accommodate wiring of various diameters.



**Output current vs resistor value** (for L05025 and L05040)

Resistor value	Output current (+/- 5%)
No resistor placed	100mA
1MΩ and higher	100mA
510KΩ	150mA
412KΩ	200mA
332KΩ	250mA
270KΩ	300mA
220KΩ	350mA
160KΩ	400mA
124KΩ	450mA
100KΩ	500mA
75KΩ	550mA
56KΩ	600mA
43KΩ	650mA
33KΩ	700mA
27KΩ	750mA
22KΩ	800mA
18KΩ	850mA
15KΩ	900mA
12KΩ	950mA
10kΩ and lower	1A
0Ω (short)	1A

## Ordering data

Part	Part number	Alternate part number	EAN code	Packaging carton	Multibox carton	Weight per piece
L05025 LED Driver 30W DALI, 7 - 43 Vdc, 100 - 1000 mA	L05025	L1A1MID100S-30E	8718801703618	50 pieces	150 pieces	165 g
L05040 LED Driver 40W DALI, 7 - 55 Vdc, 100 - 1000 mA	L05040	L1A1MIS100S-40E	8718801703366	50 pieces	150 pieces	215 g

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